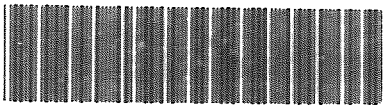

8EHQ-97-13959

The Plastics Industry Trade Association

Document Processing Center (TS-790)
Office of Pollution Prevention
and Toxic Substances
U.S. Environmental Protection Agency
401 M Street, S.W., Mail Code 7407
Washington, D.C. 20406

Attention: TSCA 8(e) Coordinator

Re: Alkyl Glycidyl Ether C_{12} - C_{13}; Preliminary results from Neurotoxicity Study

Dear Sir or Madame:

The Society of the Plastics Industry, Inc. (SPI),[1] on behalf of its Epoxy Resin Systems Alkyl Glycidyl Ether C_{12} - C_{13} Task Force, is submitting this letter under Section 8(e) of the Toxic Substances Control Act (TSCA) to report data generated during a study conducted on a formulation of alkyl glycidyl ether. The following information is being submitted by SPI pursuant to current guidance issued by the Environmental Protection Agency (EPA) indicating EPA's interpretation of Section 8(e) of TSCA. Neither SPI, nor any individual member, has made a determination as to whether a significant risk of injury to health or the environment is actually presented by the findings.

Draft of technical findings for report to EPA

Male and female Fischer 344 rats were dermally exposed to alkyl glycidyl ether (AGE) at 0, 1, 10 or 100 mg/kg/day (time weighted average) for 14 weeks. There were no treatment related findings, other than skin irritation, in clinical, functional observational battery or motor activity evaluations.

During the week following the last exposure, rats were evaluated by a battery of evoked potentials including flash-evoked potential recorded from the visual cortex (FEP-V) and cerebellum (FEP-C). All evoked potentials except the FEP-C appeared to be comparable to control. A preliminary statistical evaluation on unaudited data indicated a statistically significant decrease in amplitude and shape of early peaks of the FEP-C only in male rats exposed to either 10 or 100 mg/kg/day. In contrast, the FEP-C of female high-dose rats

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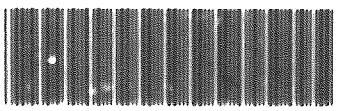
[1] SPI is a trade organization of more than 2,000 members representing all segments of the plastics industry in the United States. SPI's operating units and committee are composed of resin manufacturers and other raw materials suppliers, distributors, machinery manufacturers, plastics processors, moldmakers, and other industry-related companies and individuals.



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were larger than controls, but not significantly so.

At about 5 weeks post-exposure, a subset of male rats maintained under routine care, with no further treatment, showed FEP-Cs comparable to those taken earlier, that is, smaller in rats treated at 10 or 100 mg/kg/day. Examinations of FEP waveforms indicated a possibility that the 'source' of the amplitude differences was early in visual processing, such as retina or early visual pathway. Retinal function was evaluated in post-exposure male control and high-dose rats by electroretinography (ERG). ERGs of both control and high-dose rats were quite variable, but on average the ERGs of high-dose rats were smaller than controls. One high-dose rat had an unusually shaped ERG, and one high-dose rat had a flat ERG in one eye ('normal' ERG in the other eye). The presence of a flat ERG in one eye was not thought to be treatment related. The toxicologic significance of the FEP-C and ERG differences is unknown.

Specific questions concerning this submission should be directed to Lynne Harris (202) 974-5217.

Sincerely,

Lynne R. Harris/ca

Lynne R. Harris
Staff Director
Epoxy Resin Systems Task Group

cc: Epoxy Resin Systems Alkyl Glycidyl Ether C_{12}-C_{13} Task Force
Epoxy Resin Systems Alkyl Glycidyl Ether C_{12}-C_{13} Toxicology Task Force